

Claims:

1. A magnetic recording/reproducing apparatus comprising:

input-signal converting means for converting an input signal to a record signal through the modulation performed at the timing corresponding to the previously-specified number of tracks per division of signal;

recording-rate adjusting means for adjusting the recording rate of said record signal so as to lower the rate; and

recording means for rotating a head cylinder at a revolving speed lower than the revolving speed of a head cylinder corresponding to the timing at said modulation and corresponding to the recording rate adjusted by said recording-rate adjusting means to record the record signal after the rate is adjusted in a recording tape

2. The magnetic recording/reproducing apparatus according to claim 1, comprising:

reproducing means reproducing the record signal from said recording tape by rotating a head cylinder at the head revolving speed set by said recording means;

reproducing-rate adjusting means for adjusting the reproducing rate of a reproduction signal output from said reproducing means so as to raise the reproducing rate up to a rate suitable for modulation performed at the timing

corresponding to said previously-specified number of tracks per division of signal; and

output-signal converting means for converting a reproduction signal whose reproducing rate is adjusted by said reproducing-rate adjusting means to an output signal through demodulation performed at the timing corresponding to said previously-specified number of tracks per division of signal.

3. The magnetic recording/reproducing apparatus according to claim 1, wherein

said recording means keeps the revolving speed of said head cylinder constant even when said previously-specified number of tracks per division of signal differs due to the difference in compressibility of said record signal.

4. The magnetic recording/reproducing apparatus according to claim 1, wherein

said recording means keeps the configuration of said head cylinder same even when said previously-specified number of tracks per division of signal differs due to the difference in compressibility of said record signal.

5. The magnetic recording/reproducing apparatus according to claim 2, wherein

said recording means adjusts the feed rate of a recording tape under recording correspondingly to a set head-cylinder revolving speed.

6. The magnetic recording/reproducing apparatus according to claim 2, wherein

said reproducing means keeps the revolving speed of said head cylinder constant even when said previously-specified number of tracks per division of signal differs due to the difference in compressibility of said reproduction signal.

7. The magnetic recording/reproducing apparatus according to claim 2, wherein

said reproducing means keeps the configuration of said head cylinder same even when said previously-specified number of tracks per division of signal differs due to the difference in compressibility of said reproduction signal.

8. The magnetic recording/reproducing apparatus according to claim 5, wherein

said recording means sets the revolving speed of a head cylinder to the reduced number of tracks set by dividing said previously-specified number of tracks per division of signal by an integer smaller than the above previously-specified number of tracks so that said division of signal is divided.

9. The magnetic recording/reproducing apparatus according to claim 5, wherein

said reproducing means adjusts the feed rate of a recording tape under reproducing in accordance with a set

head-cylinder revolving speed.

10. The magnetic recording/reproducing apparatus according to claim 8, wherein

said recording-rate adjusting means includes:

first storing means;

first write controlling means for writing said record signal in said first storing means at the write timing corresponding to said previously-specified number of tracks per division of signal; and

first read controlling means for reading said record signal from said first storing means at the timing corresponding to said reduced number of tracks and supplies the signal to said recording means.

11. The magnetic recording/reproducing apparatus according to claim 10, wherein

said first read controlling means reads said record signal from said first storing means at a read clock rate lower than a write clock rate for said first storing means.

12. The magnetic recording/reproducing apparatus according to claim 10, wherein

said first write controlling means fine adjusts said write timing.

13. The magnetic recording/reproducing apparatus according to claim 10, wherein

said first read controlling means fine adjusts said

read timing.

14. The magnetic recording/reproducing apparatus according to claim 10, wherein

said reproducing-rate adjusting means includes:

second storing means;

second write controlling means for said reproduction signal in said second storing means at the write timing corresponding to said reduced number of tracks; and

second read controlling means for reading said reproduction signal from said second storing means at the timing corresponding to said previously-specified number of tracks per division of signal and supplies the signal to said output-signal converting means.

15. The magnetic recording/reproducing apparatus according to claim 14, wherein

said second read controlling means reads the reproduction signal from said second storing means at a read clock rate higher than a write clock rate for said second storing means.

16. The magnetic recording/reproducing apparatus according to claim 14, wherein

said second write controlling means fine adjusts said write timing.

17. The magnetic recording/reproducing apparatus according to claim 14, wherein

said second read controlling means fine adjusts said read timing.

18. The magnetic recording/reproducing apparatus according to claim 2, wherein

said input-signal converting means selectively fetches an input signal of one signal division every a plurality of signal divisions and converts the signal to a record signal.

19. The magnetic recording/reproducing apparatus according to claim 18, wherein

said recording means records said record signal in a recording tape while lowering the recording rate of the record signal.

20. The magnetic recording/reproducing apparatus according to claim 19, wherein

said output-signal converting means returns the recording rate lowered by said recording means to the original recording rate when converting said reproduction signal to said output signal.